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10/550,218	09/19/2005	Ilias Manettas	2003P00534W0US	1364
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EXAMINER				
RALIS, STEPHEN J				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/550,218

Applicant(s)

MANETTAS ET AL.

Examiner

STEPHEN J. RALIS

Art Unit

3742

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 June 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 12-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 12-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 September 2005 and 02 June 2009 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
2. Applicant is respectfully requested to provide a location within the disclosure to support any further amendments to the claims due to when filing an amendment an applicant should show support in the original disclosure for new or amended claims. See MPEP § 714.02 and § 2163.06 ("Applicant should specifically point out the support for any amendments made to the disclosure.").

Response to Amendment/Arguments

3. Applicant's arguments filed 02 June 2009 have been fully considered but they are not persuasive as set forth below.
4. NOTE: The amendments to the drawings and the specification are not entered due to the inclusion of new matter as asserted below. Furthermore, the objection to the drawings is outstanding, as set forth below.

Drawings

5. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the generating said pulse-duty ratio as a decreasing step function of said recorded voltage amplitude; forming at least two discrete values for said step function in a predetermined permissible range of fluctuation of said voltage amplitude; dividing a value range of said voltage amplitude into a plurality of intervals, for each said interval assigning a fixed

pulse-duty ratio and providing a ratio of upper to lower limit of each interval of between 1.1 and 1.2; assigning a pulse-duty ratio of 1 to voltage amplitudes below at least 150 VAC; and assigning a pulse-duty ratio of 1 to voltage amplitudes below at least 165 VAC (claims 16-18 and 20-26) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

6. Claims 14 and 22 are objected to because of the following informalities: "said step function" should read –said decreasing step function–. Appropriate correction is required.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

8. Claims 12-26 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. In the instant invention, the examiner can find no disclosure utilizing a "voltage amplitude" of a supply voltage as well as values being determined based on a voltage amplitude. The examiner can only find disclosure to the "voltage value" being used. Therefore, the recitation to "a voltage amplitude" is deemed new matter.

9. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

10. Claims 13-17 and 20-23 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

11. Claims 13 and 20 recite the limitation "generating said pulse-duty ratio as a decreasing step function of said recorded amplitude voltage" and variations thereof. It is unclear and uncertain to the examiner to what exact a "decreasing step function of the said recorded voltage amplitude" is and how it correlates to the generation of "said pulse-duty ratio. Furthermore, the preceding claims (12 and 19), recite a "generating a pulse-duty ratio" step and it is unclear and indefinite to how many generations of a pulse-duty ratio for a pulsed supplied current are occurring. Therefore, the recitation to limitation "generating said pulse-duty ratio as a decreasing step function of said recorded amplitude voltage" is deemed indefinite and further clarification is required. The claims were examined as best understood.

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

14. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

15. Claims 12, 18, 19 and 26 rejected under 35 U.S.C. 103(a) as being unpatentable over Zangari et al. (U.S. Publication No. 2003/0033822) in view of Chodacki et al. (U.S. Publication No. 2003/0164368).

Zangari et al. discloses a method for operating a defroster heater (47) that defrosts an evaporator of a refrigeration device (Abstract; pages 1-2; paragraph 9; page 2, paragraph 22; page 3, paragraphs 25-27; see Figures 6-8C), comprising: recording a voltage amplitude of a supply voltage for the defroster heater (pages 1-2; paragraph 9; page 3, paragraph 26); generating a pulsed supply current for the defroster heater (the operation ON/OFF of the defrost heater 47 by the same circuit 51; page 2, paragraph 22; see Figure 6) and supplying the defroster heater with the pulsed supply current for a

fixed heating interval (when the same circuit 51 is activated/closed by the driver/microprocessor 85).

With respect to the limitation of claim 19, Zangari et al. discloses a circuit breaker (circuit 51) that is activated by a control signal (driver/microprocessor 85) for supply a current feed to the defroster heater (47).

Zangari et al. disclose all of the limitations of the claimed invention, as previously set forth, except for generating a pulse-duty ratio of the pulsed supply current based upon the recorded voltage amplitude; and the fixed heating interval including a substantial number of cycles of an alternating current provided by the voltage supply.

However, generating a pulse-duty ratio of the pulsed supply current based upon the recorded voltage amplitude is known in the art. Chodacki et al., for example, teach the recording of a voltage amplitude of a power source to a resistive heating element and generating a pulse-duty ratio of a pulsed supply current based upon the amplitude of the recorded voltage amplitude (page 3, paragraphs 24, 27-28; page 4, paragraph 34 – page 5, paragraph 41; see Figures 1, 2). In addition, Chodacki et al. teach the fixed heating interval including a substantial number of cycles of an alternating current provided by the voltage supply (page 4, paragraph 34 – page 5, paragraph 41). Chodacki et al. further teach the advantage of such a configuration provides a means to increase the operational life of the resistance heating element and reduce hardware requirements as well as associated costs such as manufacturing (page 5, paragraph 43). It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the controller having the voltage amplitude of the power

supply being input thereto of Zangari et al. with the utilization of the amplitude of voltage of the power supply input to the controller and use thereof to control the pulse-duty ratio of the pulsed current supply of Chodacki et al. in order to provides a means to increase the operational life of the resistance heating element and reduce hardware requirements as well as associated costs such as manufacturing.

16. Claims 13-17 and 20-25 rejected under 35 U.S.C. 103(a), as best understood, as being unpatentable over Zangari et al. (U.S. Publication No. 2003/0033822) in view of Chodacki et al. (U.S. Publication No. 2003/0164368) as applied to claims 12, 18, 19 and 26 above, and further in view of Hickl et al. (U.S. Patent No. 5,416,300).

Zangari et al. in view of Chodacki et al. discloses all of the claimed limitations, as previously set forth, except for generating the pulse-duty ratio as a decreasing step function of the recorded voltage amplitude; forming at least two discrete values for the step function in a predetermined permissible range of fluctuation of the voltage amplitude; dividing a value range of the voltage amplitude into a plurality of intervals, for each the interval of the plurality of intervals assigning a fixed pulse-duty ratio and providing a ratio of upper to lower limit of each interval of between 1.1 and 1.2; assigning a pulse-duty ratio of 1 to voltage amplitudes below at least 150 VAC; and assigning a pulse-duty ratio of 1 to voltage amplitudes below at least 165 VAC.

However, generating the pulse-duty ratio as a decreasing step function of the recorded voltage amplitude; forming at least two discrete values for the step function in a predetermined permissible range of fluctuation of the voltage amplitude; dividing a

value range of the voltage amplitude into a plurality of intervals, for each the interval assigning a fixed pulse-duty ratio and providing a ratio of upper to lower limit of each interval of between 1.1 and 1.2 is known in the art. Hickl et al., for example teach generating the pulse-duty ratio as a decreasing step function of the recorded voltage amplitude (Abstract; column 2, line 49 – column 3, line 64; see Figures 1, 2); forming at least two discrete values for the step function in a predetermined permissible range of fluctuation of the voltage amplitude (see Figure 2); dividing a value range of the voltage amplitude into a plurality of intervals (see Figure 2). Hickl et al. further teach the advantage of such a configuration provides a means to remove the requirements of transformers, thyristors, interference suppression means for using various higher level power supplies, thereby reducing cost and space required for the utilization of different voltage power source (column 1, line 29 – column 2, line 29).

In addition, Hickl et al. teach for each of the intervals assigning a fixed pulse-duty ratio and providing a ratio of upper to lower limit of each interval of between 1.2 and 1.7 (1st region – $1.4/0.85 \approx 1.65$; 2nd region – $1.15/0.93 \approx 1.24$; 3rd region – $1.1/0.9 \approx 1.22$; 4th region – $1.08/0.87 \approx 1.24$; column 6, lines 33-57; see Figure 2). Furthermore, Hickl et al. teach assigning a power output ratio in which the keying ratio is approximately 1.03 for 165 VAC and approximately 0.81 for 150 VAC (see Figure 2)

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Zangari et al. in view of Chodacki et al. with the keyed ratio of input voltages of Hickl et al. in order to provide a means to remove the requirements of transformers, thyristors, interference suppression means for using

various higher level power supplies, thereby reducing cost and space required for the utilization of different voltage power source. To provide each of the intervals assigning a fixed pulse-duty ratio and providing a ratio of upper to lower limit of each interval of between 1.1 and 1.2 would have been a mere engineering expediency as Hickl et al. clearly teaches the use of different circuit components to attain a certain profile. Similarly, it would have further been obvious to one of ordinary skill in the art at the time of the invention was made to make each of the intervals assigning a fixed pulse-duty ratio and providing a ratio of upper to lower limit of each interval of between 1.1 and 1.2, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In addition, to provide a pulse-duty ratio of 1 to voltage amplitudes below at least 150 VAC and below at least 165 VAC would have been a mere engineering expediency as Hickl et al. clearly teaches the use of different circuit components to attain a certain keyed ratio duty cycle. It would have further been obvious to one of ordinary skill in the art at the time of the invention was made to make a pulse-duty ratio of 1 to voltage amplitudes below at least 150 VAC and below at least 165 VAC, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art.

Remarks

17. With respect to applicant's reply/argument that the recitation to a "voltage amplitude" of a supply voltage as well as values being determined based on a voltage

amplitude is not new matter, the examiner respectfully disagrees. As asserted previously and above, the specification only discloses a "voltage value" being used as basis for generating a pulsed supply current to the defroster heater. A "voltage value" of a "150 VAC" or "165 VAC" can be a frequency, period or even magnitude. However, there is no specific disclosure to the voltage value of a VAC signal being the voltage amplitude and it would not be obvious to one of ordinary skill in the art to make such an assertion without specific disclosure thereto. Therefore, the 35 U.S.C. 112, first paragraph, new matter rejection is maintained.

18. With respect to applicant's reply/argument that one of ordinary skill in the art would know and understand the subject matter of the claimed invention, the examiner respectfully disagrees. Applicant recites "further comprising generating said pulse-duty ratio as a decreasing step function of said recorded voltage amplitude." In examining Figure 2, the step function looks to be increasing not decreasing. Further clarification is required to define the orientation of the step function so that one of ordinary skill in the art would ascertain the step function is decreasing instead of increasing. In addition, the preceding claims (12 and 19), recite a "generating a pulse-duty ratio" step and it is unclear and indefinite to how many generations of a pulse-duty ratio for a pulsed supplied current are occurring. Therefore, the examiner maintains the recitation to limitation "generating said pulse-duty ratio as a decreasing step function of said recorded amplitude voltage" is deemed indefinite and further clarification is required.

19. In response to applicant's argument that Chodacki et al. is nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's

endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In the instant case, the prior art is reasonably pertinent to the particular problem with which the applicant was concerned. Applicant is concerned with providing a pulse duty ration that results in there being the right amount of heat instead of providing either not enough heat when the voltage supply is not enough or provide too much heat when the voltage supply is too much. Chodacki et al. teach the recording of a voltage amplitude of a power source to a resistive heating element and generating a pulse-duty ratio of a pulsed supply current based upon the amplitude of the recorded voltage amplitude (page 3, paragraphs 24, 27-28; page 4, paragraph 34 – page 5, paragraph 41; see Figures 1, 2). In addition, Chodacki et al. teach the fixed heating interval including a substantial number of cycles of an alternating current provided by the voltage supply (page 4, paragraph 34 – page 5, paragraph 41). Similarly, Chodacki et al. teaches “the control system, after a predetermined time period has expired, also reduces and regulates the voltage being applied thereafter so the hot surface igniter maintains a fairly consistent operating temperature...”. Chodacki et al. further teach the advantage of such a configuration provides a means to increase the operational life of the resistance heating element and reduce hardware requirements as well as associated costs such as manufacturing (page 5, paragraph 43). Clearly, Chodacki et al. is concerned with maintaining the temperature of the heater at a relatively constant operating temperature with respect to the supply voltage and one of ordinary skill in the

art would look to others faced with maintaining the temperature of the heater at a relatively constant temperature with respect to the supply voltage (see MPEP § 2141.01a). Therefore, the examiner deems Chodacki et al. as analogous and the rejection as set forth previously and above is maintained.

20. In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In the instant case, there is some teaching, suggestion, or motivation to do so found either in the references themselves. Chodacki et al. explicitly teaches the advantage of such a configuration of providing a generation of a pulse-duty ratio of the pulsed supply current based upon the recorded voltage amplitude and the fixed heating interval including a substantial number of cycles of an alternating current provided by the voltage supply provides a means to increase the operational life of the resistance heating element and reduce hardware requirements as well as associated costs such as manufacturing (page 5, paragraph 43). Therefore, the examiner has provided a proper *prima facie* case of obviousness, as set forth in MPEP § 2143, and the rejection as set forth previously and above is maintained.

21. In response to applicant's argument that Hickl et al. is nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In the instant case, the prior art is reasonably pertinent to the particular problem with which the applicant was concerned. Applicant is concerned with providing a pulse duty ratio that results in there being the right amount of heat instead of providing either not enough heat when the voltage supply is not enough or provide too much heat when the voltage supply is too much. Applicant further discloses such control is deemed as "keyed" (page 3, lines 11-25). Hickl et al. teach generating the pulse-duty ratio as a decreasing step function of the recorded voltage amplitude (Abstract; column 2, line 49 – column 3, line 64; see Figures 1, 2); forming at least two discrete values for the step function in a predetermined permissible range of fluctuation of the voltage amplitude (see Figure 2); dividing a value range of the voltage amplitude into a plurality of intervals (see Figure 2). Hickl et al. further teach the advantage of such a configuration provides a means to remove the requirements of transformers, thyristors, interference suppression means for using various higher level power supplies, thereby reducing cost and space required for the utilization of different voltage power source (column 1, line 29 – column 2, line 29). Similarly, Hickl et al. teach a keying ratio varying technique to provide a "stabilization of the power output converted at the heater (electric igniter 1) because the heating time... remains nearly constant even with great changes in voltage" (column 3, lines 47-64;

column 8, claim 4). Clearly, Hickl et al. is concerned with maintaining the heating time of the heater relatively constant to maintain an operating temperature with respect to the supply voltage and one of ordinary skill in the art would look to others faced with maintaining the heating time of the heater relatively constant to maintain an operating temperature with respect to the supply voltage (see MPEP 2141.01a). Therefore, the examiner deems Hickl et al. as analogous and the rejection as set forth previously and above is maintained.

22. In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In the instant case, there is some teaching, suggestion, or motivation to do so found either in the references themselves. Hickl et al. explicitly teach providing a generation of a pulse-duty ratio as a decreasing step function of the recorded voltage amplitude as well as providing at least at least two discrete values for the step function in a predetermined permissible range of fluctuation of the voltage amplitude (see Figure 2) and dividing a value range of the voltage amplitude into a plurality of intervals (see Figure 2) to provide a means to remove the requirements of transformers, thyristors, interference suppression means for using various higher level power supplies, thereby reducing cost and space required for

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the utilization of different voltage power source (column 1, line 29 – column 2, line 29).

Therefore, the examiner has provided a proper *prima facie* case of obviousness, as set forth in MPEP § 2143, and the rejection as set forth previously and above is maintained.

Conclusion

23. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **STEPHEN J. RALIS** whose telephone number is (571)272-6227. The examiner can normally be reached on Monday - Friday, 8:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tu Hoang can be reached on 571-272-4780. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Stephen J Ralis/
Primary Examiner, Art Unit 3742

Stephen J Ralis
Primary Examiner
Art Unit 3742

SJR
August 21, 2009